Zoomorphology

An International
Journal of Comparative and
Functional Morphology

Volume 110 1990/91

Managing Editor

O. Kraus — Zoologisches Institut und Zoologisches Museum der Universität, Martin-Luther-King-Platz 3, W-2000 Hamburg 13, Federal Republic of Germany

Editors

P. Ax — II. Zoologisches Institut und Museum der Universität, Berliner Str. 28, W-3400 Göttingen, Federal Republic of Germany

W.E. Bemis — Department of Zoology, University of Massachusetts, Amherst, MA 01003, USA

R.B. Clark — Department of Zoology, The University, Newcastle upon Tyne NE1 7RU, Great Britain

R. Elofsson — Department of Zoology, University of Lund, Helgonavägen 3, S-223 62 Lund, Sweden

C.O. Hermans — Department of Biology, Sonoma State University, Rohnert Park, CA 94928, USA

N.P. Kristensen — Department of Entomology, Zoological Museum, University of Copenhagen, Universitetsparken 15, DK-2100 Copenhagen K, Denmark

R.M. Rieger — Institut für Zoologie der Universität, Technikerstr. 25, A-6020 Innsbruck, Austria

M.H. Wake — Department of Zoology, University of California, Berkeley, CA 94720, USA

V. Ziswiler — Zoologisches Museum, Universität Zürich-Irchel, Winterthurerstr. 190, CH-8057 Zürich, Switzerland

Springer International

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA: Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. This fee is US $ 0.20 per page per copy, plus a basic fee off US $ 2.00 per article. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0720-213X, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Printers: Universitätsdruckerei H. Stürtz, AG, Würzburg

© Springer-Verlag Berlin Heidelberg 1991
Springer-Verlag GmbH & Co KG
W-1000 Berlin 33
Printed in Germany

Springer International

Contents

Issue 1 published 23.11.1990
Issue 2 published 13.12.1990
Issue 3 published 12.02.1991
Issue 4 published 28.05.1991
Issue 5 published 05.07.1991
Issue 6 published 23.08.1991

Al-Hajj H → Talbot P

Barthel D, Detmer A: The spermatogenesis of *Halichondria panicea* (Porifera, Demospongiae) 9
Bedini C → Musio C
Bickell-Page LR: Repugnatorial glands with associated striated muscle and sensory cells in *Melibe leonina* (Mollusca, Nudibranchia) 281
Binger LC → Toll RB
Bureau F, Dubois P, Ghyoot M, Jangoux M: Skeleton resorption in echinoderms: Regression of pedicellarial stalks in *Sphaerechinus granularis* (Echinoida) 217

David B, Mooi R: An echinoid that "gives birth": morphology and systematics of a new Antarctic species, *Urechinus mortenseni* (Echinodermata, Holasteroida) 75
Demers D → Talbot P
Detmer A → Barthel D
Dubois P → Bureau F

Eguileor M de, Valvassori R, Lanzavecchia G, Giorgi S: Body wall muscles in the haplotaxids *Haplotaxis gordioides* and *Pelodrilus leruthi* (Annelida, Oligochaeta) 27

Fish FE, Stein BR: Functional correlates of differences in bone density among terrestrial and aquatic genera in the family Mustelidae (Mammalia) 339

Ghyoot M → Bureau F
Giorgi S → Eguileor M de
Grimmer JC → Holland ND
Grünig C → Schlawny A
Günzl H: The ultrastructure of the posterior gut and caecum in *Alona affinis* (Crustacea, Cladocera) 139

Hentschel J → Hertwig I
Hertwig I, Schneider H, Hentschel J: Light- and electron-microscopic analysis of the statocyst of the American crayfish *Orconectes limosus* (Crustacea, Decapoda) 189
Holland ND, Grimmer JC, Wiegmann K: The structure of the sea lily *Calamocrinus diomedae*, with special reference to the articulations, skeletal microstructure, symbiotic bacteria, axial organs, and stalk tissues (Crinoida, Millericrinida) 115
Holmberg K → Olsson R
Howard D → Talbot P
Huvard AL: Ultrastructural study of the naupliar eye of the ostracode *Vargula graminicola* (Crustacea, Ostracoda) 47

Jangoux M → Bureau F

Krenn HW: Functional morphology and movements of the proboscis of Lepidoptera (Insecta) 105
Kubrakiewicz J: Ultrastructural investigation of the ovary structure of *Ophyiulus pilosus* (Myriapoda, Diplopoda) 133

Lahnsteiner F, Patzner RA: The spermatic duct of blenniid fish (Teleostei, Blenniidae): Fine structure, histochemistry and function 63
Lanzavecchia G → Eguileor M de
Lilliemarck Y → Olsson R

Märkel K, Röser U: Ultrastructure and organization of the epineural canal and the nerve cord in sea urchins (Echinodermata, Echinoida) 267
Mehl D → Reiswig HM
Melzer RR, Paulus HF: Morphology of the visual system of *Chaoborus crystallinus* (Diptera, Chaoboridae). I. Larval compound eyes and stemmata 227
Mooi R → David B
Mücke A: Innervation pattern and sensory supply of the midleg of *Schistocerca gregaria* (Insecta, Orthopteroidea) 175
Musio C, Bedini C: Fine structure and axonal organization in the buccal ganglia nerves of *Aplysia* (Mollusca, Gastropoda) 17

Nevermann L, Xylander WER, Seifert G: The hemocytes of the centipede *Lithobius forficatus* (Chilopoda, Lithobiomorpha). Light and electron microscopic studies using in vitro techniques 317

Olsson R, Holmberg K, Lilliemarck Y: Fine structure of the brain and brain nerves of *Oikopleura dioica* (Urochordata, Appendicularia) 1

Pass G: Antennal circulatory organs in Onychophora, Myriapoda and Hexapoda: Functional morphology and evolutionary implications 145
Patzner RA → Lahnsteiner F
Paulus HF → Melzer RR
Pfannenstiel H-D → Schlawny A
Purschke G: Ultrastructure of the "statocysts" in *Protodrilus* species (Polychaeta): Reconstruction of the cellular organization with morphometric data from receptor cells 91

Reiswig HM, Mehl D: Tissue organization of *Farrea occa* (Porifera, Hexactinellida) 301
Reynolds PD: Fine structure of the kidney and characterization of secretory products in *Dentalium rectius* (Mollusca, Scaphopoda) 53
Rohde K → Watson NA
Röser U → Märkel K
Ruthmann A → Thiemann M

Sanchez H → Werding B
Schlawny A, Grünig C, Pfannenstiel H-D: Sensory and secretory cells of *Ophryotrocha puerilis* (Polychaeta) 209
Schneider H → Hertwig I
Seifert G → Nevermann L
Sopott-Ehlers B: Electron microscopical observations on vitellocytes and germocytes in *Nematoplana coelogynoporoides* (Plathelminthes, Proseriata) 293
Stein BR → Fish FE

Talbot P, Al-Hajj H, Demers D, Howard D: Distribution of microfilaments and microtubules in *Homarus* pleopod tegumental glands (Crustacea, Decapoda) 329
Thiemann M, Ruthmann A: Alternative modes of asexual reproduction in *Trichoplax adhaerens* (Placozoa) 165
Thiemann M, Ruthmann A: Spherical forms of *Trichoplax adhaerens* (Placozoa) 37
Toll RB, Binger LC: Arm anomalies: cases of supernumerary development and bilateral agenesis of arm pairs in Octopoda (Mollusca, Cephalopoda) 313

Valvassori R → Eguileor M de
Viertel B: The ontogeny of the filter apparatus of anuran larvae (Amphibia, Anura) 239

Watson NA, Rohde K: Ultrastructure of spermatogenesis and sperm of *Multicotyle purvisi* (Platyhelminthes, Aspidogastrea) 347
Werding B, Sanchez H: Life habits and functional morphology of the sediment infaunal sponges *Oceanapia oleracea* and *Oceanapia peltata* (Porifera, Haplosclerida) 203
Wiegmann K → Holland ND

Xylander WER → Nevermann L

Indexed in *Currents Contents*